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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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TOSCANO, ALICIA	

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/529,255	MOENS ET AL.	
	Examiner	Art Unit	
	Alicia M. Toscano	1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 August 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14 and 17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14 and 17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/10/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 10 is objected to because of the following informalities: 0.1 should have a period, not comma, separating the numbers. Appropriate correction is required.

2. Applicant prefers the British spelling of stabilizers, as set forth in the Remarks filed 8/10/07, and the objection over claim 11 is thusly removed.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 2, 4-14 and 17 are rejected under 35 U.S.C. 103(a) as obvious over Shoji (JP 57-205458) in view of Daly (US 6294610).

An English translation translated through the USPTO of Shoji is provided. The USPTO version and the abstract version submitted by Applicants both have the "number average weight" for the molecular weight. The translation provided by Applicant's discloses only that it is the molecular weight. Since two of the three translations support the molecular weight being the number average molecular weight, it is the Examiner's position that the molecular weight disclosed by Shoji is the number average molecular weight.

Shoji discloses resin compositions for powdered paint. Said compositions comprise (a) 60-96 wt% of a polyester having an acid value of 20-200 mg KOH/g and a

Mn of 1,000-10,000 comprising terephthalic acid and neopentyl glycol (pg 4 3rd paragraph), (as required by claim 7 and 8). Since the acid value is above 0 it is the Examiners position that said polyester must be carboxyl terminated since if it had no acid groups it would have no calculable acid value. (b) 3-40 wt% of a glycidyl group containing acrylic polymer having a Mn of 300-5,000 obtained from 20-100 wt% glycidyl methacrylate and 0-80 wt% styrene (as further required by claim 3), (c) 1-20 wt% carboxyl group containing vinyl polymer having an acid value of 10-200 mg KOH/g and a Mn of 300-10,000, (paragraph 2) comprising maleic acid, itaconic acid and the like (pg 6 1st paragraph), (as required by claim 4) and (d) a catalyst (pg 6 3rd paragraph) meeting the compositional elements of Claim 1. The composition may further include fillers and fluid regulators, or flow control agents (pg 6 paragraph 3), (as required by claims 11 and 13).

Shoji does not disclose the Tg of the polymers, as further required by Claim 1

Daly discloses powder coatings. Said coating comprise (a) a glycidyl group containing copolymer (Column 5 Lines 42-65). Said glycidyl copolymer has a weight average MW of 200 to 2000 and a Tg from 40 to 60C, meeting the Tg requirements of both (A) and (A'), (b) a carboxylic acid group containing polyester (Column 3 Lines 49-Column 4 Line 30) having an acid number from 15 to 200 and a Tg from 40 to 65, meeting the Tg requirements of both (B) and (B') and (c) a carboxylic acid group containing acrylic copolymer (Column 4 Lines 32-Column 5 Line 16) having an acid number of between 15 and 200, a Tg of 40-60 and a weight average MW of 1000-20,000, meeting the Tg of (C) and (C'), and (d) a catalyst.

Shoji and Daly thusly disclose similar compositions for powder coating compositions. The selection of a known material based on its suitability for its intended use supported a prima facie obviousness determination in Sinclair & Carroll Co. v. Interchemical Corp., 325 U.S. 327, 65 USPQ 297 (1945), as such it would have been obvious to one of ordinary skill in the art at the time of the invention to use the Tg ranges taught by Daly in the composition of Shoji.

Claim 1 further includes a limitation which necessitates the use of at least one low glass transition temperature polymer (A'), (B') and (C'), it is the Examiners position that this is inherent with Daly because the Tg ranges of Daly's 3 polymer components each meet the range requirements of both the high and low Tg polymers.

Alternatively, since the Tg of Daly meets the limitations of the high and low Tg polymers of Applicant's claim 1, Daly anticipates use of both high and low Tg polymers. Daly does not specify using at least one low Tg polymer in his composition. A case of prima facie obviousness exists in cases where the claimed ranges "overlap or lie inside ranges disclosed by the prior art", see In re Wertheim, 541, F.2d 257, 191 USPQ 90 (CCPA 1976); In re Woodruff, 91 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). Since the both the low and high Tg ranges of Applicant's Claim 1 overlaps with the Tg of Daly, the composition of Daly has sufficient specificity that it would have been prima facie obvious include in Daly the use of a low Tg polymer in his composition, as required by Claim 1.

Shoji does not disclose the epoxy equivalent weight, as further required by Claim 2. Daly includes elements as set forth above. The epoxy equivalent weight of the

acrylic copolymer is 200 to 1000, the MW of the copolymer is 200 to 2000 (Column 5 Lines 48-50), thus, the epoxy equivalent weight per gram of acrylic copolymer may be 1 (200/200). The selection of a known material based on its suitability for its intended use supported a prima facie obviousness determination in Sinclair & Carroll Co. v. Interchemical Corp., 325 U.S. 327, 65 USPQ 297 (1945), as such it would have been obvious to one of ordinary skill in the art at the time of the invention to use the epoxy equivalent weight taught by Daly in the composition of Shoji, as required by Claim 2.

Shoji does not disclose whether the carboxylic polyester is amorphous or crystalline. Daly includes elements as set forth above. Daly discloses the carboxylic polyester may range from amorphous to crystalline, which includes semi-crystalline (Column 4 lines 29-30). Daly thusly teaches amorphous, crystalline and semi-crystalline polyesters to be functional equivalents.

It would have been obvious to one of ordinary skill in the art at the time of the invention to include Shoji the use of amorphous or semicrystalline carboxylic polyesters, as taught by Daly, since they are recognized in the art as functional equivalents. As the compositional requirements are met the Examiner finds the viscosity of Claims 5 and 6 and the fusion zone and degree of crystallinity of Claim 6 to inherently be met, thus all the requirements of Claims 5 and 6 are met.

The polyester Shoji is inherently linear or branched depending on the glycol discussed above, meeting the requirements of Claim 9.

Shoji discloses the use of a catalyst but does not disclose the specific catalyst used to cure the composition. Daly includes elements as set forth above. Daly

discloses that the catalyst may be phosphonium bromide (Column 6 line 11). The selection of a known material based on its suitability for its intended use supported a prima facie obviousness determination in Sinclair & Carroll Co. v. Interchemical Corp., 325 U.S. 327, 65 USPQ 297 (1945), as such it would have been obvious to one of ordinary skill in the art at the time of the invention to use the catalyst taught by Daly in the composition of Shoji, as required by Claim 10.

Shoji discloses the use of pigments such as titanium oxide (examples), Shoji does not specifically disclose that the powder paint can be clear, as further required by Claim 12. Daly includes elements as set forth above. Daly discloses the powder composition to be clear or pigmented (Column 6 lines 3-6). Daly thusly teaches the two options to be functional equivalents.

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Shoji the use of a clear powder coating, as taught by Daly, since it is recognized in the art as a functional equivalent of a pigmented coating.

Shoji does not disclose the method of coating the powder coating or the cure time, as required by Claims 14 and 17. Daly includes elements as set forth above. Use of electrostatic tribocharging spray coating is disclosed in Column 6 Lines 39-45, and coated surfaces, which are inherently partially or entirely coated, are disclosed in Column 6 lines 43-45, as required by Claim 17. The cure temperature is disclosed to be 250F (121C) (Column 6 line 59). The selection of a known material based on its suitability for its intended use supported a prima facie obviousness determination in Sinclair & Carroll Co. v. Interchemical Corp., 325 U.S. 327, 65 USPQ 297 (1945), as

such it would have been obvious to one of ordinary skill in the art at the time of the invention to use the coating method and cure time taught by Daly in the composition of Shoji.

4. Claims 1-14 and 17 are rejected under 35 U.S.C. 103(a) as obvious over Shoji (JP 57-205458) and Daly (US 6294610) in view of Pettit (5202382).

Shoji and Daly include elements of the invention as discussed above. Shoji and Daly discloses the use of 3 different polymer components in the powder coating, all having a Tg of 40-65, or a high Tg. Shoji and Daly do not explicitly include the use of a low Tg polymer mixed with a high Tg polymer for his powder coating composition.

Pettit discloses thermosetting powder coating compositions. Said compositions comprise a low Tg (Tg –20 to +30) and a high Tg (Tg 40 to 100) polymer. Pettit discloses powder composition which have only a high Tg polymer to be difficult to process and to have poor mixing capabilities (Column 1 Lines 40-52). Inclusion of a low Tg polymer results in good processability and improved blending and pigment dispersions (Column 1 Line 65-Column 2 Line 6).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Shoji and Daly the use a Tg between –20 to +30 for any one of the three polymer components, as taught by Pettit, in order to improve the processability and blending of his powder composition. Thusly, the teaching of Pettit and the compositional elements of Shoji and Daly, as discussed above, meet the requirements of Claims 1-14 and 17.

Conclusion

Response to Arguments

1. Applicant's arguments, see remarks, filed 8/10/07, with respect to Daly have been fully considered and are persuasive. The MW is higher than Mn, and thusly Daly does not anticipate the Mn of the glycidyl acrylic copolymer. The rejections have been withdrawn and new grounds are set forth above.

2. Applicant argues Daly teaches the use of components (B) and (C) in the alternative and that Daly does not teach the wt% of the components. This argument is moot in light of the removal of the rejection over Daly and the new rejection set forth above.

3. Applicant argues Daly teaches that all the polymer components have a Tg above 40C, preferably higher, and thusly does not meet the Tg requirements of the Claims. Examiner disagrees. Daly teaches a Tg of "at least about 40C" for each of the components. The term "about 40C" would encompass Tg's that are slightly lower and slightly higher than 40C, thusly the claim limitation is met. Further, all of Daly's polymers can have a Tg of about at least 40C, thusly meeting the requirements of at least 1 Tg in the range.

4. Regarding Pettit and Daly (now relevant to Shoji, Daly and Pettit), Applicant argues that there would be no reason to cross reference another document because there is no motivation in Daly to modify the Tg of the polymers. Applicant further argues Pettit is drawn to a completely different invention to form hard glossy coatings, not the

flexible coatings of applicant's invention. The Examiner disagrees. The motivation to improve processing by using a low Tg polymer in the composition is proper and thusly stands. That Daly does not disclose motivation to modify the Tg is moot since Pettit is used to teach why one of ordinary skill would want to modify the teachings of Daly.

5. Applicant's arguments drawn to Murakami are moot since Murakami is no longer relied upon in this rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia M. Toscano whose telephone number is 571-272-2451. The examiner can normally be reached on Monday to Friday 8:30 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AMT

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